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IS 12017 (1987): Cypermethrin Technical Concentrate [FAD 1:  
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IS : 12017 - 1987

*Indian Standard*  
SPECIFICATION FOR  
CYPERMETHRIN TECHNICAL CONCENTRATE

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BUREAU OF INDIAN STANDARDS  
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG  
NEW DELHI 110002

Gr 2

December 1987

# *Indian Standard*

## SPECIFICATION FOR

### CYPERMETHRIN TECHNICAL CONCENTRATE

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**AMENDMENT NO. 1 OCTOBER 1988**  
**TO**  
**IS : 12017 - 1987 SPECIFICATION FOR**  
**CYPERMETHRIN TECHNICAL CONCENTRATE**

( *Page 4, Table 1* ) — Insert the following after Sl No. (iv) under the respective columns;

(1)	(2)	(3)	(4)	(5)	(6)
v)	3-phenoxybenzaldehyde (MPB) content, percent by mass, <i>Max</i>	1·0	1·5	B	—
vi)	Cis-trans ratio, percent by mass of the nominal value	<i>Cis Min</i> 40·0 <i>Cis Max</i> 60·0	40·0 60·0	C	—

( AFCDC 6)

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AMENDMENT NO. 2 JANUARY 1990  
TO  
IS : 12017 - 1987 SPECIFICATION FOR  
CYPERMETHRIN TECHNICAL CONCENTRATE

[ *Page 4, Table 1, ( see also Amendment No. 1 )* ] — Delete SI No. (v) and entries under its respective columns, and renumber 'SI No. (vi)' as 'SI No. (v)'.

[ *Page 4, Table 1, col 3, ( see also Amendment No. 1 )* ] — Substitute 'Trans Max 60·0 for 'Cis Max 60·0'.

(FADC 1)

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# Indian Standard

## SPECIFICATION FOR CYPERMETHRIN TECHNICAL CONCENTRATE

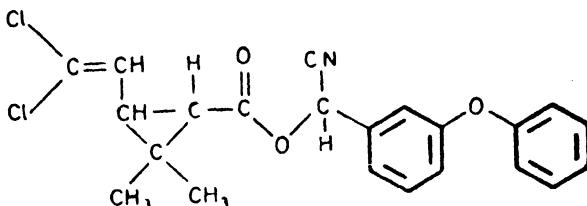
### 0. FOREWORD

**0.1** This Indian Standard was adopted by the Bureau of Indian Standards on 30 June 1987, after the draft finalized by the Pest Control Sectional Committee had been approved by the Agricultural and Food Products Division Council and the Chemical Division Council.

**0.2** Cypermethrin technical concentrate is an\* insecticide employed in the preparation of insecticidal formulations for the control of agricultural insect pests.

**0.3** Cypermethrin is the common name accepted by International Organization for Standardization ( ISO ) for ( *RS* )- $\alpha$ -Cyano-3-phenoxy benzyl ( 1, *RS* )-*cis-trans*-3- ( 2, 2 dichlorovinyl )-2-2-dimethyl cyclopropane carboxylate. The empirical and structural formulae, and the molecular mass of cypermethrin are indicated below:

<i>Empirical Formula</i>	<i>Structural Formula</i>	<i>Molecular Mass</i>
$C_{22}H_{19}Cl_2NO_3$		416.32



**0.4** In the preparation of this standard, due consideration has been given to the provisions of the *Insecticides Act, 1968*, and Rules framed thereunder. However, this standard is subject to the restrictions imposed under the Act and Rules, wherever applicable.

**0.5** For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with IS : 2-1960\*. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

\*Rules for rounding off numerical values ( *revised* ).

## 1. SCOPE

**1.1** This standard prescribes the requirements, and method of sampling and test for cypermethrin technical concentrate.

## 2. REQUIREMENTS

**2.1 Description** — The material shall be in the form of clear brown liquid free from visible extraneous matter.

**2.2** The material shall comply with the requirements specified in Table 1.

**TABLE 1 REQUIREMENTS FOR CYPERMETHRIN, TECHNICAL CONCENTRATE**

SL No.	CHARACTERISTIC	REQUIREMENT		METHOD OF TEST, REF TO	
		Grade I	Grade II	Appendix of IS : 12015-1987*	Cl No. of IS : 6940-1982†
(1)	(2)	(3)	(4)	(5)	(6)
i)	Cypermethrin content, percent by mass, <i>Min</i>	50.0	70.0	A	—
ii)	Acidity (as $H_2SO_4$ ), percent by mass, <i>Max</i>	0.15	0.20	—	11.3.2
iii)	Moisture content, percent by mass, <i>Max</i>	0.1	0.1	—	4.1
iv)	Relative density at 27°C/27°C, <i>Min</i>	1.0	1.0	—	5

\*Specification for cypermethrin technical.

†Methods of test for pesticides and their formulations (*first revision*).

## 3. PACKING

**3.1 Packing** — The material shall be packed according to the requirements given in IS : 8190 (Part 2)-1980\*.

**3.2 Marking** — The container shall bear legibly and indelibly the following information and other additional information as required under the *Insecticides Act* and Rules:

- Name of the materials;
- Name of the manufacturer or trade-mark;
- Date of manufacture;

\*Requirements for packing of pesticides: Part 2 Liquid pesticides (*first revision*).

- d) Batch number;
- e) Cypermethrin content, percent ( $m/m$ );
- f) Net mass of content; and
- g) The cautionary notice as worded in the *Insecticides Act* and Rules.

### 3.3 BIS Certification Marking

The product may also be marked with Standard Mark.

**3.3.1** The use of the Standard Mark is governed by the provisions of the Bureau of Indian Standards Act, 1986 and the Rules and Regulations made thereunder. The details of conditions under which the licence for the use of Standard Mark may be granted to manufacturers or producers may be obtained from the Bureau of Indian Standards.

## 4. SAMPLING

**4.1** Representative samples of the material shall be drawn as prescribed in IS : 10946-1984\*.

## 5. TESTS

**5.1** Tests shall be carried out by the methods referred to in col 4 and 5 of Table 1.

**5.2 Quality of Reagents** — Unless specified otherwise, pure chemicals and distilled water (*see* IS : 1070-1977†) shall be employed in the tests.

NOTE — 'Pure chemicals' shall mean chemicals that do not contain impurities which affect the results of analysis.

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\*Methods of sampling for technical grade pesticides.

†Specification for water for general laboratory use (*second revision*).

( *Continued from page 2* )

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